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## A Preliminary List of the Myriapoda of Arkansas with Descriptions of New Species.

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1. *Platydesmus Lecontei* (Wood).

One was found on the grounds of the Deaf Mute Asylum and others on the hills along the river, near Little Rock.

2. *Julus minutus* (Brandt).

I found a specimen in the swamp at south end of Main Street, Little Rock. Mr. Hutcherson also found one near Argenta.

3. *Spirobolus marginatus* (Say).

Abundant throughout the state.

4. *Parajulus cæsius* Bollman.

*Julus cæsius* Wood, Proc. Phila. Acad. Nat. Sci., 43, 1867 (Texas).

This species is not uncommon throughout the state.

5. *Cambala annulata* (Say).

I have received numerous specimens of this species, collected around Little Rock by Mr. Hutcherson.

6. *Lysiopetalum lactarium* (Say).

Common throughout the state.

7. *Campodes flavicornis* Koch.

*Campodes flavicornis* Koch, Syst. der Myr., 126, 1847 (Pa.).

*Campodes fusicornis* Koch, Syst. der Myr., 127, 1847 (Pa.).

*Spirostrephon cæsiannulatus* Wood, Trans. Amer. Philos. Soc., 194, 1865 (Alleghany Co., Pa.); Ryder, Proc. U. S. Nat. Mus., 526, 1880.

*Pseudotremia rudii* Cope, Proc. Amer. Philos. Soc., 180, 1869 (Montgomery Co., Va.); Ryder, Proc. U. S. Nat. Mus., 527, 1880.

*Cryptotrichus cæsiannulatus* Packard, Proc. Amer. Philos. Soc., 190, 1883 (Culmana, Ala., or Ocean Springs, Miss.).

A single specimen was obtained at Little Rock. As this species has a number of synonyms, I have thought it best to give its synonymy.

8. *Craspedosoma flavidum* sp. nov.

Yellowish brown, feet and antennæ lighter. Robust, segments not constricted, lateral carinæ small and body strongly resembling that of *Campodes*. Antennæ longer than width of body. Ocelli 12-14, distinct, arranged in a triangular patch and in 5 or 6 series. Dorsal plates rather smooth, setigerous granules small, setæ rather large. Male feet crassate, those of female slender.

Length of body 5.8 mm.; width .7 mm.

Hab.—Okolona.

This species strongly resembles a *Campodes*. In life the individuals are a dusky yellow. This description is based upon a male and female.

9. *Craspedosoma carniatum* Bollman.

Not common in the Fourche bottoms, south of Little Rock; also found on the grounds of the Deaf Mute Asylum.

10. *Leptodesmus hispidipes* (Wood).

Abundant everywhere.

Very common throughout the State. All specimens obtained were young, but the shells of many adults were found.

11. *Euryurus evides* Bollman.

*Paradesmus evides*, Bollman, Ent. Amer., II, 229, 1887 (Winona, Minn.).

Common over the State. Specimens agree with those from Minn.

12. *Chætaspis albus* Bollman.

*Chætaspis albus*, Bollman, Ent. Amer., III, 46, 1887 (Bloomington, Ind.).

One specimen obtained at Little Rock.

13. *Polydesmus minor* sp. nov.

Dark shining brown, lighter beneath. Moderately slender, depressed, slightly acuminate anteriorly and posteriorly, smooth, very sparsely pilose (setigerous). Antennæ equal to width of body, subclavate. First dorsal plate wide, angles not or but slightly produced, not toothed, tubercles not distinct, except lateral. Other dorsal

plates with posterior angles produced, especially posteriorly; lateral margins three or four toothed, indistinct posteriorly, tubercles distinct, arranged in two rows of four each, anterior border indistinctly divided into two, posteriorly, the last row of tubercles project beyond border of segments. Legs long, crassate in male.

Male: copulation foot very similar to *serratus*; ventral plates produced into a short, pilose lobe anteriorly.

Length of body 10—14 mm., width 1.5—1.8 mm.

Hab.—Little Rock.

This species is described from a number of specimens found in the low lands, south of Little Rock.

#### 14. *Polydesmus pinetorum*, sp. nov.

Very similar to *P. serratus*, but the general color paler and size smaller. Tuberculation not so distinct, sides of first segment 1 toothed, other distinctly 3 or 4 toothed. Last row of scales on posterior segments composed of six or eight setae tipped scales, which project beyond border of segments. Ventral plate of ninth pair of legs not produced as in *serratus*, copulation foot very similar.

Length of body 15 to 18.5 mm.; width 2.2 to 2.8 mm.

Hab.—Little Rock, Arkadelphia, Okolona, Murfreeboro, and Ultima Thule.

As already indicated, this species is closely related to *serratus*. It is principally separated by its smaller size and form of the ventral of ninth pair of legs of male.

This species may only represent a geographical form of *serratus*. It is very abundant throughout the state, and all those collected during the summer were in the larva stages. I am indebted to Mr. Hutcherson for adult specimens.

#### 15. *Fontaria virginiensis* (Drury).

Abundant at Donaldson, common at Okolona.

Specimens from Arkansas are similar to those from North Carolina, but those from northern parts of Mississippi valley represent geographical species.

At Donaldson the adults were found crawling on the surface of the ground in company with a large number of their young, probably one adult to five or eight hundred young, then (July 11, 1887) about half grown.

This species seems to be more confined to river bottoms, and low rich woodlands.

The odor of prussic acid is strongly emitted by this species through a series of pores on each side of the body.

#### 16. *Sphæriodesmus pudicus* sp. nov.

General color pinkish, especially posteriorly, anterior half of segments darkest, a black median dorsal line, antennæ dark, legs pale. Body widest and highest anteriorly, tapering posteriorly, smooth, setæ absent. Vertex smooth, somewhat sulcate. Antennæ subclavate, about equalling width of body. Dorsal plates smooth, four preceding the last with an indistinct row of obtuse scales; lateral plates except

the first, antepenult and penult with their posterior margin serrate. Anal plate triangular with the angles rounded, sparsely pilose. Legs long and slender, extending beyond sides of body.

Male: ventral plate of second pair of legs produced into two short cones; coxæ of second and third pairs more pilose than others; copulation foot much twisted, end expanded and divided, pilose.

Length of body 7 mm.; width 2 mm.

Hab.—Little Rock and Okolona.

This is the first time that any species of this genus has been found in the United States. It is easily distinguished from *S. mexicanus* (Saussure), by having a few scales on posterior dorsal plates.

The collection contains two specimens of this species.

17. *Polyxenus fasciculatus* Say.

Common at Little Rock, five were obtained at Antoine and one at Ultima Thule.

18. *Paupopus lubbockii* Packard.

A few specimens were obtained at Little Rock.

19. *Linotænia bothriopa* (Wood).

I have received one specimen that was collected near Little Rock by Mr. Hutcherson.

20. *Linotænia robusta* (Meinert).

*Scolioplanes robustus* Meinert, Proc. Amer. Phil. Soc., 224, 1886 (?N. A.).

Frontal plate present. Fulvous, head and antennæ dark. Not robust, attenuated anteriorly and posteriorly; moderately smooth, sparsely pilose. Prehensorial feet smooth, sparsely pilose; sternum subcordiform, length and width subequal; coxæ a little wider than long, unarmed; tooth strong, acute; claw small, a little curved. Cephalic plate somewhat wider than long, smooth, sparsely pilose, sides strongly rounded, slightly diverging, posterior margin only covering a small part of basal plate, basal plate two-thirds as long as cephalic, twice as wide as long. Antennæ moderately short, articles short, penult and antepenult not noticeably shortened.

Dorsal plates subsmooth, anterior prescuta short, median and posterior long. Spiracles round, very small. Ventral plates with an obsolete median foveola, pores on posterior margin. First pair of legs short, posterior longer than anterior. Posterior coxæ moderately inflated, pores about 12 to 18, small, in three series; last ventral plate triangular, small, sides moderately converging. Posterior pair of legs longer than penult, crassate in the male, slender in the female; claw large. Pairs of legs of male 51—55; of female 54—59.

Length of male 27—33 mm.; of female 34—52 mm.

Hab.—Little Rock, Okolona, Arkadelphia and Ultima Thule.

I refer this species provisionally to *L. robusta* (Meinert), although it differs from Meinert's description by rather unimportant characters. I have also seen specimens of this species from Tennessee.

21. *Linotænia branneri* sp. nov.

Frontal plate present. Fulvous, head and antennæ dark. Robust, strongly attenuated anteriorly, less posteriorly; moderately smooth, sparsely pilose. Prehensorial

feet smooth, sparsely pilose; sternum subcordiform, wider than long (5:3); coxæ wider than long, unarmed; tooth strong, acute; claw large, curved. Cephalic plate subquadrangular, sides rounded, slightly diverging posteriorly; basal plate about half as long as cephalic, twice as wide as long, anterior margin scarcely covered by cephalic plate. Antennæ long, joints moderate, penult and antepenult longer than wide. Dorsal plates moderately smooth; anterior and posterior precuta moderate, median larger. Spiracles round, moderately large. Ventral plates with a distinct median sulcus; pores on posterior part. First pair of legs moderately short, anterior and posterior subequal. Posterior coxæ strongly inflated, pores large and small, about twelve. Anal legs of the female slender, claw large. Pairs of legs of female 43.

Length of female 37 mm.

Hab.—Little Rock.

This species is named in honor of Dr. J. C. Branner, State Geologist of Arkansas.

The collection contains one specimen of this species. It is related to *bothriopa*, but is distinguished by a smaller number of legs and its large posterior coxa and pores.

22. *Geophilus perforatus* (McNiell).

*Schendila perforatus*, McNiell, Proc. U. S. Nat. Mus., 325, 1887 (Pensacola, Fla.).

Abundant throughout the State.

23. *Geophilus okolonæ* sp. nov.

Frontal plate absent; anal pores absent. Fulvous, head and antennæ darkest. Rather slender, very slightly attenuated anteriorly and posteriorly, smooth, very sparsely pilose and punctate. Prehensorial feet smooth, punctate, sternum wider than long (4:3.5); coxa of about equal length and width, unarmed; claw moderately curved; teeth almost obsolete. Cephalic plate slightly longer than wide, suboval, posterior margin truncate, sparsely punctate and pilose; prebasal plate exposed; basal plate much wider than long (5:2). Antennæ short, penult and antepenult joints not noticeably shortened. Dorsal plates distinctly bisulcate. Anterior spiracle rather large, oval, oblique, median and posterior smaller. Ventral plate with an indistinct median sulcus; pores not manifest. First pair of legs short, anterior and posterior subequal. Posterior coxa scarcely inflated, pores absent; last ventral plate wide, side moderately converging, not densely pilose. Anal legs produced, armed, rather densely pilose beneath, crassate. Pairs of legs of male 61; of female 63.

Length of body 40 mm.

Hab.—Okolona.

There are two adults of this species in the collection. It is separated from other North American species by having no coxal pores and the prebasal plate exposed.

24. *Geophilus salemensis* Bollman.

I have seen one specimen that was collected near Little Rock by Mr. Hutcherson.

25. *Cryptops hyalinus* Say.

*Cryptops hyalina* Say, Journ. Phila. Acad. Nat. Sci., III, 1820

(E. Florida); Say, Oeuvres Ent., sp. 3, 1822; Newport, Trans. Linn. Soc., 409, 1844; Newport, Cat. Myr. Brit. Mus. Chil., 60, 1856; Wood, Trans. Amer. Philos. Soc., 168, 1865; Underwood, Ent. Amer., 65, 1887.

*Cryptops hyalinus* Koch, Syst. d. Myr., 175, 1847; Gervais, Aptères, IV, 293, 1847.

? *Cryptops milberti* Gervais, Aptères, IV, 592, 1847 (New Jersey).

? *Cryptops milbertii* Wood, Trans. Amer. Philos. Soc., 168, 1865; Underwood, Ent. Amer., 65, 1887.

*Cryptops asperipes* Wood, Proc. Phil. Acad. Nat. Sci., 129, 1867 (Montgomery Co., Virginia); McNiell, Proc. U. S. Nat. Museum, 326, 1887 (Pensacola, Fla.); Underwood, Ent. Amer., 65, 1887.

*Cryptops sulcatus* Meinert, Proc. Amer. Philos. Soc., 211, 1886 (Bee Spring, Ky.); Underwood, Ent. Amer., 65, 1887.

The study of a large series of specimens of the genus *Cryptops* has convinced me that all the species of *Cryptops* described from North America belong to a single species—*hyalinus* Say.

I have questioned the *Cryptops milberti* of Gervais, because the author states that the spines of the last pair of feet are absent. This character is contrary to the true definition of *Cryptops* and I am inclined to think that either Gervais had an abnormal specimen or that his observations were incorrect.

*Asperipes* Wood, has been separated from the other species by the number of antennal joints (19), which he assigned to his species, but as the number of joints has recently been found to be variable it is not a true character upon which species can be based.

In Ent. Amer., 65, 1887, Dr. Underwood says the last pair of legs of *sulcatus* Meinert, are unarmed, as in *milberti* Gervais, but in this he is mistaken, for, in his generic description Dr. Meinert states that the last pair of legs are armed with a definite number of spines.

Considering this state of characters, I believe that all the described species should be united under *C. hyalinus*. I have examined specimens of this species from the following States: Maryland, Pennsylvania, Indiana, Tennessee, North Carolina, Florida, Indian Territory, and Arkansas, where it is very common.

**26. *Theatops spinicaudus* (Wood).**

Abundant from Little Rock to Ultima Thule.

**27. *Scolopendra heros* Girard.**

Two adults were obtained at Little Rock, several young at Murfreesboro and Muddy Fork.

28. *Scolopendra woodii* Meinert.

A single specimen was caught at Donaldson.

29. *Scolopocryptops sexspinosus* (Say).

Common at all points; these specimens are of a darker shade than northern or eastern examples.

30. *Henicops fulvicornis* (Meinert).

A single specimen was obtained at Little Rock near the Deaf Mute Asylum. This is a European species, and the only other recorded North American locality is Mount Lebanon, New York.

31. *Lithobius branneri* Bollman.

A single specimen was obtained at Okolona and another at Little Rock.

32. *Lithobius proridens* Bollman.

A few were obtained at Little Rock. One individual is considerably larger than any specimen collected before.

33. *Lithobius pinguis* sp. nov.

Posterior angles of all the dorsal plates straight. Anal pair of legs armed with two claws. Coxal pores few, in a single series. Penultimate pair of legs armed with two claws. Coxæ of the posterior feet unarmed. Dark chestnut brown, head and antennæ dark, legs paler. Slender, not smooth, sparsely pilose; head wider than long (3.5:3), polished, not pilose. Antennæ short, 22- to 24-jointed, articles short. Ocelli 4 to 6, arranged in 2 or 3 series. Prosternal teeth 2 + 2. Coxal pores 3,3,3,2 to 4,4,4,4, round. Spines of the first pair of legs 0,0,1; penultimate pair 1,3,2,1 to 1,3,3,1; anal pair 1,3,2,0. Posterior legs short.

Female: claw of the genitalia entire, stout and much curved; spines strong, subequal.

Length of body 9—10 mm.

Hab.—Little Rock.

This description is based on three specimens. This is the smallest North American species with the claw of the female genitalia entire.

34. *Lithobius celer* sp. nov.

Posterior angles of the 9, 11, 13 dorsal plates produced. Anal pair of legs armed with one claw. Coxal pores few, in a single series. Penultimate pair of legs armed with two claws. Coxæ of the 13, 14, 15 pairs of feet laterally armed. Brown of various shades, head and legs more or less chestnut, antennæ dark. Moderately robust, smooth, sparsely pilose; head about as long as wide, pilose. Antennæ rather long, 30- to 34-jointed, articles small. Ocelli 18 to 40, arranged in 4 to 7 series. Prosternal teeth 5 + 5 to 7 + 7. Coxal pores 2,3,3,2 to 5,6,6,5, round. Spines of the first pair of legs 1,2,1 to 2,2,1; penultimate pair 1,3,3,1 to 1,3,3,2; anal pair 1,3,3,1 to 1,3,3,2. Posterior legs short.

Male: tibia of anal legs somewhat crassate, and furrowed beneath; but more furrowed in the female.



Female : claw of the genitalia short, tripartite, middle lobe much longer, others subequal ; spines moderately slender, inner shortest.

Length of body 15—25 mm.

Abundant or common throughout the State.

This species is not strongly related to any known North American locality, it should be placed near *forficatus*, which it seems to replace in Arkansas.

Dr. Wood has reported *forficatus* from Arkansas and he may have had the species which I have described.

35. *Lithobius œdipes*, sp. nov.

Posterior angles of the 9, 11, 13 dorsal plates produced. Anal pair of legs armed with two claws. Coxal pores few, in a single series. Penultimate pair of legs armed with two claws. Posterior coxae unarmed. Brown, head and antennae dark, legs and ventral plates paler. Robust, not smooth, sparsely pilose ; head smooth, of about equal length and breadth (3.2, 3.6). Antennae short, attenuate, 24- to 26-jointed (♂, 26, ♀ 24). Ocelli 9 to 11, arranged in 3 or 4 series. Prosternal teeth 2 + 2 or 3 + 3. Coxal pores 3,5,4,3 to 6,5,5,5 round. Spines of the first pair of legs 1,1,1 : penultimate pair 1,3,3,2 ; anal pair 1,3,3,1. Posterior pair of legs short.

Male : femur of the last pair of legs somewhat bent inwardly and swollen ; tibia very strongly swollen, especially above and having a bunch of hairs on the posterior third ; first tarsal joint crassate. Penultimate pair of legs somewhat swollen, principally the tibia ; first tarsal joint produced into a short lobe on the inner side.

Female : posterior pair of legs scarcely swollen ; claw of the genitalia entire : spines 2—2.

Length of male 15.4 mm. ; of female 20 mm.

Hab.—Little Rock.

I have three specimens of this species. This is the only known species with both the anal and penultimate pairs of feet swollen or produced into lobes.

36. *Lithobius transmarinus* Koch.

Abundant at Little Rock, common at other localities.

37. *Lithobius mordax* Koch.

Common from Little Rock to Ultima Thule.

38. *Lithobius vorax* Meinert.

Found at all points where collections were made, but was more common at Little Rock.

39. *Lithobius multidentatus* Newport.

In a vial of Myriapods that were collected near Little Rock by Mr. Hutcherson, there is a single specimen of this species.

40. *Scutigera forceps* (Rafinesque).

One adult was seen at Arkadelphia, and several young at Little Rock.

INDIANA UNIVERSITY. March 28, 1888.